

ABSTRACT OF THE DISCLOSURE

An electric communication signal block resonator, comprising a block of dielectric materials having an outside surface including a top surface, a bottom surface, and at least first and second side surfaces. The block defines at least one through-hole and each through-hole extends from an opening in the bottom surface to an opening in the top surface. Further, a metallization is deposited via a photodefinable process onto said block. The metallization includes input/output coupling metallization deposited via a photodefinable process as well as metallization of tunable varactors deposited via a photodefinable process. Also, the present invention is a method of applying patterned metallization to a ceramic block comprising the steps of: applying a photodefinable ink to said ceramic block; drying said ink; exposing said photodefinable ink to UV radiation through a predefined mask according to the thickness of the film to form a pattern; developing said pattern in a developer solution thereby forming a patterned ceramic block; and rinsing, drying and firing said patterned ceramic block.